

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Original): An image processing method, performed by an image supply device storing image data and an image output device performing image processing with respect to the image data, which are connected via a communication path through which the image data is communicated, the method comprising steps of:

generating a control information item including a script for the image processing which is described by a markup language; and

communicating the control information item between the image supply device and the image output device, the communicating step comprising:

interpreting a control protocol for communicating the control information item, by a first entity which executes processing for a first hierarchic layer of a communication protocol;

interpreting a management protocol for managing an image data file including the image data, by a second entity which executes processing for a second hierarchic layer of the communication protocol which is lower than the first hierarchic layer;

controlling a physical layer of the communication path, by a third entity which executes processing for a third hierarchic layer of the communication protocol which is lower than the second hierarchic layer; and

translating a command in the control information item between the control protocol and the management protocol.

Claim 2 (Original): The image processing method as set forth in claim 1, wherein the management protocol is one of a picture transfer protocol (PTP) or a mass storage class of a universal serial bus (USB).

Claim 3 (Original): The image processing method as set forth in claim 1, wherein the third entity controls a universal serial bus (USB).

Claim 4 (Original): The image processing method as set forth in claim 3, wherein a still image capture device class is used for the USB.

Claim 5 (Original): The image processing method as set forth in claim 1, wherein the second entity manages the image data file through use of a predetermined file system.

Claim 6 (Original): The image processing method as set forth in claim 1, wherein the third entity controls one of a wireless local area network (LAN) and a peer to peer wireless data communication.

Claim 7 (Original): An image processing system, comprising;
an image supply device, operable to store image data; and
an image output device, connected to the image supply device via a communication path through which the image data is communicated, and operable to perform image processing with respect to the image data,
wherein each of the image supply device and the image output device comprises:
a communication controller, operable to communicate, between the image supply device and the image output device, a control information item including a script for the image processing which is described by a markup language;
a first entity, operable to execute processing for a first hierarchic layer of a communication protocol, and to interpret a control protocol for communicating the control information item;
a second entity, operable to execute processing for a second hierarchic layer of the communication protocol of the communication protocol which is lower than the first hierarchic layer, and to interpret a management protocol for managing an image data file including the image data;
a third entity, operable to execute processing for a third hierarchic layer of the communication protocol of the communication protocol which is lower than the second hierarchic layer, and to control a physical layer of the communication path; and
a translator, which translates a command in the control information item between the control protocol and the management protocol.

Claim 8 (Original): An image output device, connected to an image supply device storing image data via a communication path, the image output device comprising:

a communication controller, operable to communicate, between the image supply device and the image output device, a control information item including a script for the image processing which is described by a markup language;

a first entity, operable to execute processing for a first hierarchic layer of a communication protocol, and to interpret a control protocol for communicating the control information item;

a second entity, operable to execute processing for a second hierarchic layer of the communication protocol of the communication protocol which is lower than the first hierarchic layer, and to interpret a management protocol for managing an image data file including the image data;

a third entity, operable to execute processing for a third hierarchic layer of the communication protocol of the communication protocol which is lower than the second hierarchic layer, and to control a physical layer of the communication path; and

a translator, which translates a command in the control information item between the control protocol and the management protocol.

Claim 9 (Canceled).

Claim 10 (Original): An image supply device, connected to an image output device performing image processing via a communication path, the image supply device comprising:

- a storage, which stores image data to be subjected to the image processing;
- a communication controller, operable to communicate, between the image supply device and the image output device, a control information item including a script for the image processing which is described by a markup language;
- a first entity, operable to execute processing for a first hierarchic layer of a communication protocol, and to interpret a control protocol for communicating the control information item;
- a second entity, operable to execute processing for a second hierarchic layer of the communication protocol of the communication protocol which is lower than the first hierarchic layer, and to interpret a management protocol for managing an image data file including the image data;
- a third entity, operable to execute processing for a third hierarchic layer of the communication protocol of the communication protocol which is lower than the second hierarchic layer, and to control a physical layer of the communication path; and
- a translator, which translates a command in the control information item between the control protocol and the management protocol.

Claim 11 (Canceled).

Claim 12 (Original): An image processing method, performed by an image supply device storing image data and an image output device performing image processing with respect to the image data which are connected via a communication path through which the image data is communicated, the method comprising steps of:

generating a control information item including a script for the image processing which is described by a markup language; and

communicating the control information item between the image supply device and the image output device, the communicating step comprising:

interpreting a control protocol for communicating the control information item, by a first entity which executes processing for a first hierarchic layer of a communication protocol;

selecting one of second entities each executes processing for a second hierarchic layer of the communication protocol which is lower than the first hierarchic layer,

selecting one of third entities each executes processing for a third hierarchic layer of the communication protocol which is lower than the second hierarchic layer;

interpreting a management protocol for managing an image data file including the image data, by the selected one of the second entities;

controlling a physical layer of the communication path, by the selected one of the third entities; and

translating a command in the control information item between the control protocol and the management protocol.

Claim 13 (Original): The image processing method as set forth in claim 12, wherein the management protocol is one of a picture transfer protocol (PTP) or a mass storage class of a universal serial bus (USB).

Claim 14 (Original): The image processing method as set forth in claim 12, wherein the selected one of the third entities controls a universal serial bus (USB).

Claim 15 (Original): The image processing method as set forth in claim 14, wherein a still image capture device class is used for the USB.

Claim 16 (Original): The image processing method as set forth in claim 12, wherein the selected one of the second entities manages the image data file through use of a predetermined file system.

Claim 17 (Original): The image processing method as set forth in claim 12, wherein the selected one of the third entities controls one of a wireless local area network (LAN) and a peer to peer wireless data communication.

Claim 18 (Original): The image processing method as set forth in claim 17, wherein the selected one of the second entities is valid in both of the image supply device and the image output device.

Claim 19 (Original): The image processing method as set forth in claim 17, wherein the selecting step is performed in accordance with a state of the communication path.

Claim 20 (Original): The image processing method as set forth in claim 19, wherein the selecting step is performed based on a priority table such that one of the second entities and one of the third entities having respectively a relatively higher order in the priority table are selected prior to ones having a relatively lower order in the priority table.

Claim 21 (Original): An image processing system, comprising:

an image supply device, operable to store image data; and

an image output device, connected to the image supply device via a communication path through which the image data is communicated, and operable to perform image processing with respect to the image data,

wherein each of the image supply device and the image output device comprises:

a communication controller, operable to communicate, between the image supply device and the image output device, a control information item including a script for the image processing which is described by a markup language;

a first entity, operable to execute processing for a first hierarchic layer of a communication protocol, and to interpret a control protocol for communicating the control information item;

a plurality of second entities, each operable to execute processing for a second hierarchic layer of the communication protocol of the communication protocol which is lower than the first hierarchic layer, and to interpret a management protocol for managing an image data file including the image data;

a plurality of third entities, each operable to execute processing for a third hierarchic layer of the communication protocol of the communication protocol which is lower than the second hierarchic layer, and to control a physical layer of the communication path;

a selector, which selects one of the second entities and a third entities; and

a translator, which translates a command in the control information item between the control protocol and the management protocol interpreted by the selected one of the second entities.

Claim 22 (Original): An image output device, connected to an image supply device storing image data via a communication path, the image output device comprising:

a communication controller, operable to communicate, between the image supply device and the image output device, a control information item including a script for the image processing which is described by a markup language;

a first entity, operable to execute processing for a first hierarchic layer of a communication protocol, and to interpret a control protocol for communicating the control information item;

a plurality of second entities, each operable to execute processing for a second hierarchic layer of the communication protocol of the communication protocol which is lower than the first hierarchic layer, and to interpret a management protocol for managing an image data file including the image data;

a plurality of third entities, each operable to execute processing for a third hierarchic layer of the communication protocol of the communication protocol which is lower than the second hierarchic layer, and to control a physical layer of the communication path;

a selector, which selects one of the second entities and a third entities; and

a translator, which translates a command in the control information item between the control protocol interpreted by the first entity and the management protocol interpreted by the selected one of the second entities.

Claim 23 (Canceled).

Claim 24 (Original): An image supply device, connected to an image output device performing image processing via a communication path, the image supply device comprising:

- a storage, which stores image data to be subjected to the image processing;
- a communication controller, operable to communicate, between the image supply device and the image output device, a control information item including a script for the image processing which is described by a markup language;
- a first entity, operable to execute processing for a first hierarchic layer of a communication protocol, and to interpret a control protocol for communicating the control information item;
- a plurality of second entities, each operable to execute processing for a second hierarchic layer of the communication protocol of the communication protocol which is lower than the first hierarchic layer, and to interpret a management protocol for managing an image data file including the image data;
- a plurality of third entities, each operable to execute processing for a third hierarchic layer of the communication protocol of the communication protocol which is lower than the second hierarchic layer, and to control a physical layer of the communication path;
- a selector, which selects one of the second entities and a third entities; and
- a translator, which translates a command in the control information item between the control protocol interpreted by the first entity and the management protocol interpreted by the selected one of the second entities.

Claim 25 (Canceled).